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Burr. Medico-Legal Notes on Case of
Edward W. Ruloff.

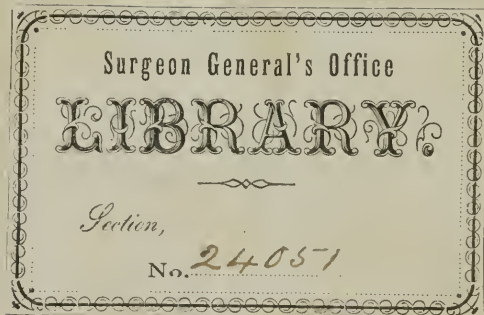
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MEDICO-LEGAL NOTES

ON THE CASE OF

EDWARD H. RULOFF;

WITH

OBSERVATIONS UPON, AND MEASUREMENTS OF,
HIS CRANIUM, BRAIN, ETC.

BY

GEORGE BURR, M. D.,

BINGHAMTON, N. Y.

[REPRINTED FROM THE JOURNAL OF PSYCHOLOGICAL MEDICINE,
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MEDICO-LEGAL NOTES ON THE CASE OF EDWARD H. RULOFF.¹

MR. PRESIDENT AND GENTLEMEN OF THE MEDICO-LEGAL
SOCIETY :

IN rising to submit for your consideration what I am about to present, I do so with a certain degree of embarrassment, caused by a distrust of my own ability to do justice to your expectations, and an apprehension that my paper may not be sufficiently complete to make it any thing like a suitable contribution to the objects of your Society. If what I am now about to lay before you shall be deemed worthy of your approval and commendation, I shall be abundantly compensated. If, on the other hand, its faults should be too glaring, and its deficiencies too apparent, I respectfully beg permission to bespeak, beforehand, your liberal indulgence.

Edward H. Ruloff was executed at Binghamton, N. Y., on the 18th day of May last (1871), for the murder of Frederick A. Mirrick.

IN order the better to comprehend the various points of alleged error on the trial ; the several medico-legal questions connected with the case, as well as the more satisfactorily to compare the peculiar characteristics of the man with the post-mortem examinations, and the size, form, and other peculiarities of the cranium and brain ; the circumstances attending

¹ Read before the Medico-Legal Society of New York City, September 1871.

the homicide, and the previous history of Ruloff, should be briefly recapitulated. The circumstances of the murder for which he was convicted and executed are substantially as follows :

Mirrick was a clerk in the store of Halbert Brothers, dry-goods merchants, doing business in Binghamton, and, in company with a fellow-clerk, Gilbert S. Burrows, occupied the store as a sleeping-apartment—a bed or cot was so arranged, that it could readily be prepared for such a purpose after the business of the day had closed. On the morning of Wednesday, August 17, 1870, at about half-past one or two o'clock, these young men were awakened by some unusual noise, when they discovered three men standing near their bed. These men had burglariously entered the store, and had made some progress in removing packages of silk goods. Two, at least, of the men wore masks. The two clerks sprang from their bed, and a conflict immediately ensued—they attacking the burglars. Mirrick drew a pistol and snapped it twice at them, when two of them retreated down-stairs into a lower story. The third remained, and struck Burrows on the head with an iron chisel ; but he was immediately thrown down by Burrows, who wrenched the chisel from his hand, and with it struck him a blow, inflicting a wound over the right eye. Mirrick likewise struck the prostrate burglar a blow with the round top of a stool, such as is used in counting-rooms ; upon which he (the burglar) called loudly upon his retreating comrades for help. They immediately returned. The first, as he reached the head of the stairs coming from the lower story, was seized by Mirrick, and a violent struggle ensued, during which the burglar (now known to be Jarvis) was thrown upon his back over a counter, and Mirrick was above or over him, holding him in that position. As the other or third burglar came up the stairs, Burrows, supposing his first man disabled, advanced to meet him, and threw his chisel at him, which took effect upon his scalp. This burglar returned the assault by firing a pistol three times in quick succession ; the last shot, striking the bannister, caused slivers to fly into Burrows's face, when he, supposing himself seriously wounded, made no further attempts at resistance. The third burglar then passed

directly to where Mirrick and Jarvis were engaged, and, seizing Mirrick's head by his left hand, drew it on one side, and discharged the contents of his pistol into its back part. The ball entered on the right of the occiput, passed into the cavity of the cranium, wounding the right lateral sinus, and a portion of it was afterward found upon the floor of the right lateral ventricle. Death ensued in about an hour. The burglars immediately fled. Meantime, Burrows had given the alarm, and officers and citizens rallied. Pursuit was instituted, but no trace of the burglars could be found. During the ensuing day the authorities, both of the county and city, were actively engaged; and measures were taken to secure, if possible, the arrest of the perpetrators of the crime. Patrols were stationed, during the succeeding night, to watch every avenue of egress from the town. Ruloff was arrested about one o'clock that night by the patrol stationed along the Erie Railway track, east of Binghamton. When first observed, he was stealthily making his way along the track in an easterly direction. He was ordered to halt several times, but refused; just then a train of cars, coming up, intercepted the approach of the patrol to him, and, when the train had passed, he was nowhere to be seen. Two hours later he was discovered in an out-house on premises adjoining the railway. He was then taken to town, and locked up in jail. The next day he was brought before the coroner's jury, when he gave his name as Charles Augustus; afterward it was George Williams. Up to this time he was unknown to every person present. While before the coroner's jury, and undergoing an examination, he was recognized as Edward H. Ruloff by Hon. Ransom Balcom, a justice of the Supreme Court, before whom, in former years, Ruloff had been on trial. After having been examined at some length, the coroner discharged him; but, soon after, new facts coming to light, he was pursued, retaken, and brought back to jail. The next morning (Friday) the bodies of two men were discovered floating in the Chenango River. On bringing them to the shore, portions of false faces were found hanging by strings about their necks; one had received a wound, as from a blow upon the left side of the forehead; a ball of twine, corresponding in all respects with that with

which the bundles of silk goods had been secured, was found in one of their pockets; the bits, with which the back-door of the store had been bored, were also found in another pocket; and other circumstances, which fully identified them as the bodies of two of the three perpetrators of the crime. In attempting to wade across the Chenango River, in their flight from the store, they had plunged into deep water, and had been drowned. During the day a photographic picture of the bodies, as they lay side by side, was taken, with a view to subsequent identification. Ruloff, on being brought to view the bodies, denied all acquaintance with or knowledge of them. The coroner now decided to hold him (Ruloff) in custody, to await the action of the next grand jury.

A bill of indictment was found against Ruloff at the September term of the Court of Oyer and Terminer. On being arraigned, he interposed the general plea of not guilty. The trial, on his own motion, was put over until the next January term.

At the ensuing January term of the Court of Oyer and Terminer held in and for the county of Broome, the trial took place: Hon. Henry Hogeboom, of the county of Columbia, and a justice of the Supreme Court, presiding. Hon. M. B. Champlain, Attorney-General, Peter W. Hopkins, Esq., District Attorney for the county of Broome, and Lewis Seymour, Esq., a counsellor of the Supreme Court, appeared for the people; and George Becker and N. D. Whitney, Esqrs., of Binghamton, and Hon. Charles L. Beale, of Columbia County, for the prisoner. The trial continued for eight days, at the end of which the jury returned a verdict of guilty of murder in the first degree; and the prisoner was sentenced to be hanged on the 3d day of March following. On the 25th day of January, 1871, Judge Hogeboom allowed a writ of error, which brought the case before the General Term of the Supreme Court, held at Albany on the 7th day of February; but, in allowing the writ of error, Judge Hogeboom refused to grant a stay of proceedings. The case was argued at this General Term of the Supreme Court, and the judgment and sentence of the Broome Oyer and Terminer were affirmed. On the 28th day of February, three days before the time ap

pointed for the execution, Judge Rapallo, of the Court of Appeals, allowed a further writ of error, and a stay of proceedings, thus bringing the case before that tribunal. The Court of Appeals sustained the finding of the courts below, and Ruloff was taken before the General Term of the Supreme Court in session at Elmira in April, and was there sentenced to be hanged on the 18th day of May. The sentence was carried into effect on that day, and Ruloff paid the penalty of his crime with his life.

The points of alleged error upon which the case went up to the Court of Appeals were of a purely legal character, and do not involve questions in medical or physiological science. There was no pretence of insanity at the trial—no question as to the effect of the pistol-shot wound in causing the death of Mirrick.

It may not, however, be entirely useless to refer to at least two of the points of alleged error which the plaintiff in error (Ruloff) urged before the Supreme Court and the Court of Appeals. It will be remembered that the two clerks began the affray. When first awakened, they discovered the three burglars standing near the bed, and they at once attacked them, Mirrick snapping his pistol two or three times. Two of the burglars retreated down-stairs, the other returned the assault by striking Burrows on the head with the chisel. It was argued by the prisoner's counsel that the subsequent killing could not be, as the jury had found, "murder in the first degree," but that at most it was one of the lower grades of manslaughter; that at the time Mirrick himself was engaged in "a felonious attempt unnecessarily to kill an intercepted felon, and was doing him great bodily harm; that the killing was done in resisting such attempt, without felonious intent," and that "in making this attempt, Mirrick was *himself* a wrong-doer, and not under the full protection of the law."

During the trial, the counsel for the prisoner requested the judge to charge in favor of this view, of the transaction as a matter of law; this his Honor declined to do, holding that they were questions of fact upon which the jury must find.

Another point was somewhat novel. It was important that the bodies of the two drowned men should be identified.

No one who saw them, recognized either one. They had lain in the water two days; were now exposed to a warm atmosphere, and decomposition was rapidly progressing; and unless their present appearance could be preserved, in a few hours all hopes of recognition would be gone. A photograph picture was therefore taken of the bodies, which, by means of a stereoscopic instrument, enabled acquaintances subsequently to recognize in them the persons of Jarvis and Dexter, both ascertained to be comrades and associates of Ruloff. Counsel for the prisoner objected on the trial to any evidence of identification being received, founded upon an examination of the pictures. The objection was overruled, and exception taken. In this case there were other circumstances which corroborated the testimony of the witnesses who identified the bodies from viewing the pictures, and which established their identity beyond all doubt; but as this kind of evidence is quite likely hereafter to be employed in various ways upon the trial of cases, the remarks of Judge Potter, one of the judges of the Supreme Court, holding the General Term, in discussing the point, may very properly be quoted. He says: "It is the every-day practice to use the discoveries in science to aid in the investigation of truth. As well might we deny the use of the compass to the surveyor or mariner; the mirror to the truthful reflection of images; or spectacles to aid the failing sight, as to deny in this day of advanced science the correctness, in greater or less degree depending upon the perfection of the machine, and the skilful admission of light, to the photographic instrument, its power to produce likenesses; and upon the principle, also, that a sworn copy can be proved when the original is lost or cannot be produced, this evidence was admissible." As germane to this point, I add the following, taken from the *New York Evening Post*, which, although a newspaper paragraph, is somewhat significant of the future employment of photographs upon the witness-stand:

"An Australian gentleman, examining a mining claim, was seized, stripped, and covered with tar and wool. He went and got himself photographed in this guise, and sued his assailants for two thousand dollars' damages, putting in his picture as evidence."

All the points of alleged error made in the case of Ruloff, as is well known, were overruled by the Court of Appeals, and the decisions and rulings of Judge Hogeboom on the trial confirmed, as also the finding of the jury. It is proper now to state that Ruloff, before his execution, admitted that the bodies found in the Chenango River were those of Jarvis and Dexter; that he had been associated with them for years; that he was the third man present in the store that night; and that he fired the shot which was fatal to Mirrick. He, however, disclaimed all intention of murder on entering the store and declared that, if the young men had kept quiet, they would not have been harmed.

This admission of Ruloff of the correctness of all the proceedings in his case, while it ought not perhaps to lead us to believe in the infallibility of our courts, yet it should inspire us with confidence in their ability to ferret out crime, and in the correctness of their findings, when the law is administered by an able and upright judge, and the facts are passed upon by a conscientious and fearless jury.

Long before the murder of Mirrick, Ruloff had attained an extensive and wide-spread notoriety for crime. Not only in the public estimation was he thus connected, but in the recorded judicial proceedings of our State his name stands conspicuous. Nearly thirty years ago (in 1842) he first appeared in the vicinity of Ithaca, in the county of Tompkins. He here engaged in various avocations—laboring, teaching school, studying medicine with a botanic physician, and finally practising in the neighborhood as a botanic physician. He also gave some lectures on phrenology. He married a young lady of that vicinity, and in due time a daughter was added to his household. Both his wife and child suddenly disappeared. Neither has been seen or heard from since the 24th day of June, 1845. The accounts which Ruloff gave for their disappearance were contradictory and evasive. It was known that disputes and bad feeling had been engendered between him and his wife, and her family, and it soon came to be generally believed that he had murdered his wife and child, and that he had sunk their bodies in the waters of the Cayuga Lake. That belief prevails to this day.

Ruloff was soon after arrested for the supposed crime. An indictment for forcibly abducting and imprisoning his wife was found against him, and in January, 1846, he was found guilty of this offence and sentenced to the State-prison at Auburn for ten years. This term he served out in prison. At the close of his term of imprisonment, and while in the office of the warden, before he had passed outside the walls, he was again arrested by the sheriff of Tompkins County on an indictment charging him with the murder of his wife, and he was at once taken back to the Tompkins County jail. This indictment was never brought to trial, a *nolle prosequi* having been entered in the matter; but in June following (1856), an indictment for the murder of his child was found against him, upon which he was arraigned and pleaded not guilty. On application to the Supreme Court, it appearing that an impartial trial could not be obtained in the county of Tompkins, an order was made that the indictment be tried in the county of Tioga. The cause (having previously been removed from the Oyer and Terminer to the Supreme Court by writ of *certiorari*) came on for trial at the Tioga Circuit, before the Hon. Charles Mason, one of the justices of the Supreme Court, on the 28th day of October, 1856.—(Vide 3 *Parker's Criminal Reports*, p. 401.) Upon this trial the prosecution relied upon certain facts and circumstances to make out their case, they having no proof by direct evidence that the child was dead or had been murdered, or that her dead body had ever been found or seen by any one. The jury, instructed by the court that the *corpus delicti*, the body of the crime, could be “established by circumstances proved so strong and intense as to produce the full certainty of death,” brought in a verdict of guilty, and Ruloff was sentenced to be hanged.

Thus, according to the finding of the several juries engaged in this case, the anomalous fact was established that Ruloff abducted his wife and murdered his child, although they both disappeared at the same time, and neither has been heard from since.

The General Term of the Supreme Court of the Sixth Judicial District, composed of Judges Mason, Gray, and Balcom, affirmed the rulings and findings of the Tioga Circuit, Judge

Balcom dissenting; and at a subsequent term of the same court, Ruloff made a motion for a stay of proceedings, which he argued in person, but which was denied, and he was again sentenced to be hanged. A stay of proceedings was, however, at length obtained by his counsel, and a writ of error allowed, which brought the case to the Court of Appeals, where the verdict and judgment of the Supreme Court were set aside, and a new trial ordered.

It was pending these proceedings, while lying in jail at Ithaca, that Ruloff became acquainted with young Jarvis, then a sprightly lad, and also with his mother, the wife of the jailer, over both of whom Ruloff obtained a most powerful and fatal influence, and by whose agency it is supposed he was enabled to break jail and escape. This he did, and while a fugitive, and wandering about the hills of Western Pennsylvania, he froze his foot, causing the deformity which connected him with so much certainty with the crime at Binghamton.

Ruloff was in time retaken and brought back to Ithaca. About this time the decision of the Court of Appeals having been made known, the public indignation culminated in a determination on a day appointed to force the jail and to inflict upon Ruloff the punishment which they believed he had evaded by the technicalities of the law. The day before the appointed time, the sheriff quietly removed him to the jail of Cayuga County, where he remained until the order for his release was received.

At this result the disappointment and excitement of the people of Tompkins County and vicinity became intense. They believed that a felon had escaped a just and well-deserved punishment. And when the enormity of the crime was remembered, no less than the murder of his own wife and child, the successful concealment of the bodies, the tact and ability he had displayed in the various legal proceedings, his reputation for scholastic attainments, and the success with which they believed justice had been foiled, all conspired to produce a degree of exasperation throughout the entire community heretofore unequalled. With the lapse of years this excitement had died away, but the deep conviction of Ruloff's guilt remained. When, therefore, he appeared again upon the scene as a parti-

participant in the murder of Mirrick, at Binghamton, the popular excitement was renewed with the utmost fury. The public sentiment now demanded that justice should not again be evaded; but that the law should be vindicated and its penalties paid. And when subsequent events connected with his life were made known, exaggerated and colored as they undoubtedly were by the newspaper press, he came to be regarded as a criminal of the deepest dye; while his attainments in learning, and the intellectual ability he had displayed in various ways—his plans, his successes, his trials, his escapes—had in the imagination of the people surrounded his history with a tinge of romance not inferior to that of Eugene Aram.

After Ruloff's release from the custody of the sheriff of Tompkins County, in 1860, he seems to have at once fallen into a life of criminal associations and practices. If we can believe his own declaration, however, he desired to pursue an honorable course, and was actually engaged in teaching in North Carolina, when a cry of distress from Jarvis, who was in jail at Buffalo, induced him to give up his situation at the South, and go to the relief of his former friend.

From this time the associations of the two were intimate. They established their headquarters in the city of New York, whence they made incursions upon various parts of the country for the purposes of plunder, and to obtain the means of support. Ruloff also was engaged upon the work on philology, which he had projected, and of the success of which he seems to have had the most extravagant anticipations. He was, however, unfortunate in being frequently caught while making his forays upon the public. During the ten years from 1860 to 1870, under various *aliases*, he served terms of imprisonment in the State-prison at Sing Sing, in the Connecticut State-prison at Wethersfield, and in the New Hampshire State-prison at Concord.

Ruloff, as has been stated, was executed by hanging, on the 18th day of May, 1871. The mode selected was by jerking him up while standing upon his feet, by letting fall a heavy weight.

For the observations made at the time of the execution, the post-mortem appearances, the preparation of the specimen,

the measurements of the cranium and face, and the notes upon the brain, I am indebted to my son, Daniel S. Burr, M. D., who was present at the execution, and who conducted the examinations with accuracy and care.

A few involuntary movements, of the arms particularly, immediately followed Ruloff's suspension; but there was no struggling, no convulsions, no discoloration or distortion of the features, and in fifteen minutes life was extinct. Thirty hours after death, the head was severed from the body, by dividing the neck between the fifth and sixth cervical vertebræ. No examination of the body was had.

The Neck.—A dissection of the neck was first made. The mark of the cord around the neck was distinct. There was no



FIG. 1.

ecchymosis in the subcutaneous tissue; but the skin where it had been compressed by the cord had become hardened, and somewhat resembled a narrow strip of parchment. The vertebræ were all entire, the odontoid process was unbroken, and the transverse ligament was not ruptured.

The Head.—The countenance was pale, no tumefaction of the face. The lens of the right eye was found to be fractured. The brain was removed and weighed, the soft parts dissected

away, when the bones of the head were subjected to the process of maceration, and a preparation has since been made.

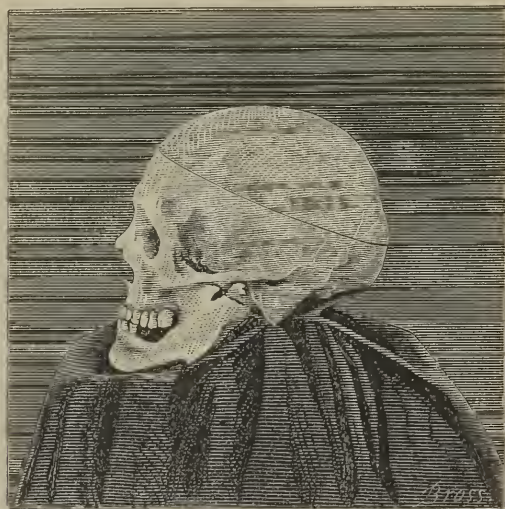


FIG. 2.

The Cranium.—The outlines of the cranium are not unsymmetrical. The outer surface is uniform, and presents the usual regular convexity, with the exception of several promi-

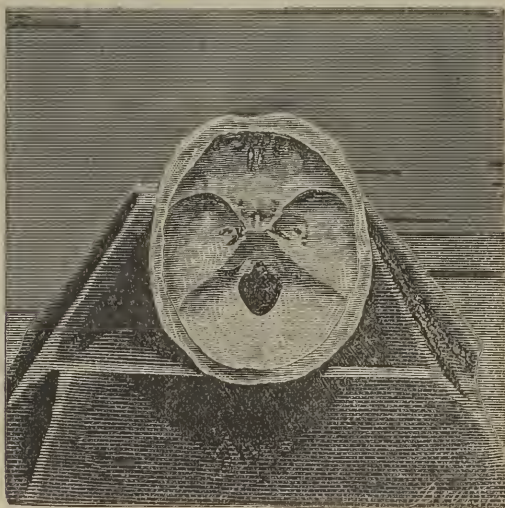


FIG. 3.

ment points. The occipital and two parietal protuberances are unusually large, and the summit in front of the vertex is markedly prominent.

In size, the cranium is much beyond the average, as will be seen by reference to the several measurements hereinafter given. In shape it is more circular than the best-formed crania. There is great breadth in the posterior and inferior regions. The base is also broad. The general expression which an external view gives, is that of a dull, heavy, and somewhat coarse organization. The forehead is not high, and is retreating, although the facial angle is not lessened, owing to the projecting of the superciliary ridges. On sawing through to remove the calvarium, the unusual thickness of the walls came under notice. The thickest portion is over the left orbit, and measures half an inch in thickness, the thinnest is in the right temporal region, where its thickness is one-quarter of an inch.

The internal surface of the walls of the cranium presents some points of interest. It will be noticed that this surface is not as distinctly indented by the convolutions of the brain as is usual; neither is it as regularly concave or dome-like. That portion which is over the anterior fossa is very thick, and runs down from the groove for the longitudinal sinus in a straight, smooth plane, like the roof of a house.

While the base of the cranium and the inferior portion of its sides are diaphanous, and transmit a certain degree of light, the upper portion is comparatively opaque. This may be regarded as an indication that the lower convolutions and inferior portions of the brain were more active than the superior.

The following are the measurements of the cranium made, following the suggestions of Dr. J. Aitken Meigs,¹ viz.:

1. Occipito-frontal or longitudinal diameter	$7\frac{11}{16}$ inches.
2. Frontal or anterior transverse diameter	$5\frac{3}{16}$ "
3. Depth of supra-orbital plates	$1\frac{15}{16}$ "
4. Frontal altitude	$2\frac{7}{16}$ "
5. Bi-temporal diameter	$6\frac{3}{16}$ "

¹ The Mensuration of the Human Skull, by J. Aitken Meigs, M. D., etc., etc. (Reprinted from the North American Medico-Chirurgical Review, September, 1861.) Philadelphia: J. B. Lippincott & Co., 1861.

6. Parietal altitude, or height of middle lobes	$4\frac{6}{16}$	inches.
7. Antero-posterior diameter, or length of middle lobes.....	$2\frac{1}{4}$	"
8. Bi-parietal diameter	6	"
9. Posterior transverse diameter.....	$4\frac{1\frac{1}{2}}{16}$	"
11. Vertical diameter, or depth of skull.....	$5\frac{1\frac{1}{2}}{16}$	"
14. Occipito-frontal arch.....	$15\frac{1\frac{1}{2}}{16}$	"
15. Frontal arch.....	$12\frac{1\frac{1}{2}}{16}$	"
16. Parietal arch.....	$14\frac{6}{16}$	"
17. Occipital arch.....	$11\frac{6}{16}$	"
18. Horizontal periphery.....	$22\frac{5}{16}$	"
19. Meato-frontal diameter	$4\frac{7}{16}$	"
20. Meato-parietal diameter	$3\frac{1\frac{1}{2}}{16}$	"
21. Meato-occipital diameter	$4\frac{5}{16}$	"
22. Meato-malar diameter	$3\frac{3}{16}$	"
23. Meato-alveolar diameter	$4\frac{6}{16}$	"
24. Meato-mental diameter	5	"
40. Inter-auricular diameter, or breadth of base.....	$4\frac{4}{16}$	"
45. Position of the foramen magnum :		
a. From anterior margin of foramen to incisor alveoli..	$3\frac{1}{4}$	"
b. From posterior margin to the occiput	$1\frac{1\frac{1}{2}}{16}$	"
46. Antero-posterior diameter of the foramen magnum	$1\frac{1\frac{1}{2}}{16}$	"
47. Transverse diameter of the foramen magnum.....	$1\frac{4}{16}$	"
48. Shape of the foramen magnum.		

The size or capacity of the cavity of the cranium has been estimated according to the suggestions of Dr. Meigs, by multiplying certain measurements of different portions of the external cranium together, with the following result :

Anterior fossa.....	$24\frac{1}{2}$	cubic inches.
Middle fossa.....	$54\frac{3}{4}$	" "
Posterior fossa.....	$66\frac{1}{16}$	" "
Total.....	$145\frac{3\frac{5}{8}}{16}$	" "

This, at best, is only an approximation to the actual size of the cavity, and the total seems too large. A careful revision of the calculations discovers no error, and the result is given as above.

A further calculation was made by multiplying the average length, the average breadth, and the average height of the skull together, and the result by this calculation gave, as the size of the cranial cavity, 140 cubic inches.

It must be remembered, however, that these measurements are external, and that, on account of the unusual thickness of

the skull (twice, at least, that of ordinary skulls), they would indicate a larger cavity than actually existed.

The entire cavity was subsequently filled with the meal of Indian corn; this was poured out into a square box, and measured 109 cubic inches. This is probably a little below the actual capacity of Ruloff's cranium, as the meal may not have filled up every part of the cavity. In estimating its size at 120 cubic inches, we shall not be far from its true measurement.

The Face.—The outlines of the face are broad and angular, and, but for the projection of the chin, the facial line would be nearly perpendicular. The zygomatic arches are wide apart; the cheek-bones prominent; the nasal bones short; the upper jaw not projecting, but broad; the lower jaw likewise broad; the chin square and prominent; the rami strong, and standing at nearly a right angle with the base. But for the loss of the molar teeth, the lower jaw would be large and stout. It is likewise deeply indented by the action of its powerful muscles.

The following measurements of the face were made:

25. Naso-alveolar diameter.....	$2\frac{1}{6}$ inches.
26. Naso-mental diameter, or length of face.....	$4\frac{1}{6}$ "
27. Bi-zygomatic diameter, or breadth of face.....	$5\frac{1}{6}$ "
28. Depth of the temporo-zygomatic fossa.....	1 inch.
29. Height of the anterior opening of the orbit.....	$1\frac{9}{16}$ inches.
30. Breadth " " " ".....	$1\frac{1}{6}$ "
31. Direction of the transverse axis of the anterior opening of the orbit—the outer extremity inclined downward.	
32. Shape of the anterior opening of the orbit—nearly square.	
33. Inter-orbital diameter, or breadth of nose at the root.....	$1\frac{6}{8}$ "
34. Distance between the external angular processes.....	$4\frac{7}{16}$ "
35. Suborbital diameter, or breadth of the superior maxilla...	$3\frac{1}{8}$ "
36. Length of nose.....	$2\frac{4}{16}$ "
37. Breadth of nasal orifice.....	$1\frac{1}{16}$ "
38. Circumference of the upper jaw.....	
39. Circumference of the lower jaw.....	
41. Length of the hard palate.....	$1\frac{1}{8}$ "
42. Depth " ".....	$\frac{8}{16}$ "
43. Breadth " ".....	$1\frac{8}{16}$ "

The weight of all the bones of the head is 2 lbs. 8 oz. $1\frac{1}{2}$ drs. avoirdupois.

Of the Brain.—The brain was removed from the cranial cavity within thirty-six hours after death. There was no apoplectic extravasation. The convolutions were numerous and very distinct. The entire encephalon weighed fifty-nine ounces avoirdupois.

Weight of the cerebrum.....	50 $\frac{1}{2}$ ounces.
“ “ cerebellum, pons Varolii, and medulla oblongata	8 $\frac{3}{4}$ “
Relative weight of cerebellum, etc., to cerebrum.....	1 to 7 “

After having been immersed in alcohol for several weeks, the following observations upon the brain were made :

Depth of fissure of Sylvius.....	$\frac{7}{8}$ of an inch.
“ of external layer of vesicular matter or cortical substance.	$\frac{3}{16}$ “
“ of space between convolutions at vertex.....	$\frac{5}{8}$ “



FIG. 4.

The largest development of brain at the cavity of the cranium, and the relative proportions of the mass itself would indicate, was in the posterior and inferior regions. The proportion between the weight of the cerebrum and the remaining divisions of the encephalon was less than the average ; or in other words, the relative weight of the cerebellum, pons Varolii, and medulla oblongata, to the cerebrum in Ruloff's brain, was as 1 to 7 ; while the average proportion, as made out by Prof. Reid, in brains of persons between fifty and sixty years of age, seventeen having been examined, was as 1 to 8 $\frac{1}{2}$.

The proportion of the weight of the brain to that of the body was as 1 to 46.

In appearance, Ruloff was "a man about five feet eight inches in height. . . . Mouth rather large, with closely-compressed lips; nose small; eyes dark gray, with large pupils and steady; the whole expression of the face concentrated, showing great self-control and power of attention; shoulders broad, chest full, in fact a compact, vigorous frame, small hands and well-shaped arms."¹ His hair was coarse, standing out from the scalp, and coming low down upon the forehead.

His countenance when in repose was stolid and indifferent; when giving vent to his frequent ebullitions of passion, it was repulsive and forbidding; but, when animated by some subject in which he took an interest, like his favorite theme philology, his features assumed an active, lively, and intelligent expression. His voice in ordinary conversation, and when in an undertone, was agreeable; but when speaking, as in addressing the court, which he frequently did during his trial, it was shrill and harsh. In walking he stooped forward, and had a shambling, shuffling gait, such as he would be very likely to acquire during his long confinements in the various prisons in which he had been incarcerated.

His entire organization, as has been remarked of the cranium, was coarse. It was not without vigor or powers of endurance, but its material was not of the best quality, and was wanting in that fine finish which is now regarded as the best development of the human structure. In some respects his organization resembled that deteriorated condition or that low type of *physique* which has been declared by Mr. Bruce Thomson to be characteristic of criminals as a class.

It is extremely difficult to analyze or even to comprehend all the points in the character of Ruloff; there were so many antagonistic features, and so many opposing traits. In fact, he seemed to have possessed two distinct natures. In one he was a pleasant, sprightly, and intelligent gentleman; in the other he was a coarse, violent, and repulsive *brute*. In his better nature, his aspirations were honorable and praiseworthy. He wished, as he not unfrequently expressed himself, to be a

¹ Report of Drs. Gray and Vanderpoel to Governor Hoffman.

gentleman, and respected by his fellow-men. He was ambitious of praise and consideration. In his other phase, he was regardless of all consequences, opinionated, self-willed, and determined in his own way, without the slightest deference to the opinions of others. In the struggles between these two natures, the worse appears generally to have been victorious. This must have been the case at the beginning of his career, so far as it has been made public. A waif upon the tide of human life, he drifted to a remote town in the county of Tompkins—inexperienced, and without fixed plans for the future. He had a taste for literary and scientific pursuits—wished to be a gentleman, and desired to follow a respectable calling, and so, without much credit to his sagacity or good judgment, he chose to become a *botanic* physician. He married, and commenced practice in that vicinity. As his experience enlarged, and his true position began to be understood by himself, he became dissatisfied, and would have sought a wider and a different sphere of operations. In this, he was opposed by his wife and her family, who doubtless had seen more or less of his bad nature cropping out. Ruloff now began to regard his wife as an obstacle to his plans, an impediment in the way of his success; and soon after, by his own hand, her lifeless body, and probably that of their child, found a resting-place at the bottom of the Cayuga Lake.

In such a fearful manner first openly appeared that prominent propensity in Ruloff's character, which impelled him to remove all obstacles in his way at the sacrifice even of human life, or that induced him, as will be hereinafter claimed, to plunder and steal, in order to promote his favorite plans and undertakings. This was a prominent feature in his character.

Ruloff had a strong mental organization, and many of the operations of his mind were performed with vigor and force. His perceptions were not acute nor active; on the contrary, they were dull, and at times almost stupidly so. In an emergency he was slow to perceive or to appreciate the circumstances surrounding him, and consequently, if pursuit was instituted after any of their depredations, he would be arrested and convicted, as was the case in Dutchess County, in Connecticut, and in New Hampshire, while his associates escaped. The

circumstances attending his arrest at Binghamton strikingly illustrate this stupidity of character, if it may be so termed. The murder of Mirrick took place between two and three o'clock on the morning of August 17th. During the ensuing day active and effective measures were taken to capture the perpetrators of the crime. The next night every avenue out of town was strictly guarded by patrols under the direction of the police, the Erie Railway track being one of them. The patrol on this track brought to several persons during the night, and among them a young medical gentleman, then as now a resident of the city of New York, but who, born and bred in Binghamton, was home on a short visit to his parents; and, on the night in question, returning at a late hour, having been out on an errand not dissimilar to that for which "Leander swam the Hellespont," found himself suddenly surrounded by a body of armed young men, seized by the collar, and ordered to surrender. A very few words of explanation to his old associates and playfellows of course released the doctor. It was before the face of this patrol that Ruloff came shambling along, apparently unsuspecting that any watch or guard would be placed over the thoroughfares of the town. And when released by the coroner, knowing as he did his own participation in the crime, instead of taking measures to elude pursuit in case any circumstance should be brought to light against him, he openly took the railroad-track again, and as a matter of course was easily followed and retaken. A similar unaccountable course of conduct and numerous contradictory explanations characterized him after the disappearance of his wife and child. Whatever intellectual ability may be hereafter claimed for Ruloff, it is certain that he was not an expert in concealing crime, or in eluding the vigilance of officers and detectives.

Ruloff's intellect was of a superior order. It may have been somewhat overrated in the estimation of many, yet I am quite sure his intellectual capacity would compare favorably with the best minds. It was more in abstract pursuits—in metaphysics, in discussing some subtle philosophical proposition, and in certain branches of science—that his mind displayed its vigor, rather than in subjects of a more practical

character, or that had reference to the present time. Like every one else, perhaps, his intellect had its range, beyond which it exhibited no remarkable features.

When about sixteen years of age he says of himself he first became interested in the study of languages. From that time, under every circumstance, during his prison-life, and even under sentence of death, it was his favorite and all-absorbing pursuit. The history of the formation and the philosophy of various languages, especially the Greek, were his constant study, and he acquired an extensive and critical knowledge, not only of the Greek and Latin, but also of the more ancient as well as the modern European tongues. His favorite study, however, was the Greek, and his proficiency and familiarity with this language and its literature excited the surprise and admiration of his better-educated visitors.

While a convict in the Auburn prison, he prepared a criticism "upon parts of Prof. Tayler Lewis's edition of one of Plato's dialogues," which he sent to a gentlemen then, I believe, a member of the Theological Seminary, but who is now a professor in Amherst College. This criticism having been seen by Prof. R. H. Mather, likewise of Amherst College, induced him, while at Binghamton, to seek an interview with Ruloff, which took place the day succeeding his final sentence. The following extract from the published account of the interview, as related by Prof. Mather, is most certainly conclusive as to the attainments and scholarship of Ruloff in the languages:

"The next morning, about nine o'clock, the advocate and I went down to the prison, and the gentlemanly high-sheriff at once consented to the interview, if Ruloff were willing. The doomed man at first refused, as he had done of late to all visitors, but, when told that I was a student and teacher of Greek, he at once consented. He approached the heavy latticed iron door, and asked very politely if I could remain long enough to learn something of the beauties of his theory of language. Without replying, I turned to the officer and asked if I might be permitted to go into the cell. He said yes, and proceeded to unlock the massive padlocks. It was a long, narrow, granite-built room, but high, and furnished

with plenty of light and pure air. As we entered, Ruloff approached with two dilapidated chairs, and, with the most winning courtesy, asked us to be seated, and offered to relieve me of my hat. He sat down on his rude pallet opposite me, and I told him that I had seen the criticism referred to above, and that I had desired to learn how he had acquired his knowledge of the old languages. He replied, with a smile, that he had obtained it all by honest work; that he had never been in a college or university, but that from boyhood he had had a most intense interest in the beauty and strength of the Greek tongue. He complained that he had been laughed at by the public as a superficial scholar, and wanted me to satisfy myself on that, and then hear what he had to say about the formation of language. I replied that as we had no textbooks I could not examine him, to which he rejoined that many of the classical authors he knew by heart, and would try and repeat portions if I would suggest where he should begin. Thinking that something from the 'Memorabilia' might be appropriate to his present needs, I suggested the third chapter, first book, where the sentiments of Socrates with reference to God and duty in their purity and exaltation approach so nearly to Biblical revelation; and he at once gave me the Greek. Other parts of the same work, as well as the 'Iliad' of Homer and some of the plays of Sophocles, he showed great familiarity with. Then, in order to show his thoroughness, he criticised the common rendering of certain passages, and he did it with such subtlety, and discrimination, and elegance, as to show that his critical study of these nicer points was more remarkable than his powers of memory; in fact, I should say that subtlety of analysis and of reasoning was the marked characteristic of his mind. On one or two passages of Homer, in particular, he showed great acuteness of criticism, and a most thorough appreciation of the grandeur of the sentiment. One or two renderings of President Felton he opposed most vigorously, and, when I supported the common version, he quoted from a vast range of classics to confirm his view."

Ruloff possessed the power of adapting himself to different pursuits with facility, and of employing his intellect in various

ways. While in prison at Auburn he was most of the time engaged in the carpet-shop of J. Barber & Co., "where he was employed," writes Hiram Whiting, Esq., the clerk, "in making patterns and designs for carpets. He was successful in this business, being industrious and ingenious, exhibiting much capacity, tact, and skill."

Ruloff, I believe, had never been admitted to practise in any of our courts, and was not consequently an attorney and counsellor. He, however, was well versed in the law applicable to the trial of criminal cases, in the rules of evidence, etc. On his trial for the murder of Mirrick, he in person cross-examined many of the witnesses, made objections to the course of the prosecution, and argued his points before the court. In some of the proceedings connected with the disappearance of his wife and child, he appeared without counsel, prepared his papers, made his motions, and argued them with ability and tact. In 1869, under the name of James E. Dalton, he appeared before the Cortland County Court, as counsel for Dexter, who had been arrested and held in jail for stealing silks. He there made an argument in behalf of his associate, and was successful in obtaining his discharge.

His answers to the commissioners sent to examine him, by Governor Hoffman, show extensive thought and a matured mind. He spoke of his reading works on German metaphysics, and his acceptance of the doctrines of Kant and Comte, with the assurance of one who was conscious of his intellectual strength; and he avoided with skill the questions designed to throw doubt upon the opinions he had embraced.

Ruloff's emotional nature was not of the highest order. If he had at any time entertained aspirations for fame and distinction, for an honorable and elevated position in life, he by some passionate outbreak destroyed his opportunities, and disappointed his desires. The circumstances, of which he claimed to have been the victim all his life, are attributable to this cause. He was subject to violent paroxysms of anger, revenge, jealousy, and distrust, before which his judgment and will were powerless. He worshipped no Supreme Being; venerated nothing, unless it may have been an old Greek book, and acknowledged no accountability to a higher power.

He was apparently insensible to the consequences of his acts. Never a word of regret or compunction of conscience, so far as is known, escaped his lips. In this respect he verified the observations of Dr. Despine, as quoted by Mr. Bruce Thomson: "In reading," remarks Dr. Despine, "without any preconceived views, the reports of criminal trials, I was struck with the constant recurrence, among those who had committed crimes in cold blood, of a mental condition marked by the absence of all moral remonstrance, before the act premeditated, and the absence, not less complete, of all remorse after the accomplishment thereof." Mr. Thomson makes the further remark as characteristic of criminals in Scotland: "Besides the absence of moral sense, the want of manly courage, and of confidence in each other, and a habit of universal lying, may be mentioned as characteristic of this class; and nothing affords stronger proof of their moral insensibility, than the fact of their not being amenable to the teachings of chaplains and other instructors." ¹

Ruloff would have been a perfect specimen of this class in the hands of Mr. Thomson. He distrusted everybody, and was himself faithless toward all, unless Jarvis be an exception. Under the most solemn circumstances, just before receiving final sentence of death, he filed a lying paper with the court, and, as for any relenting, or sorrow, or desire for religious consolation, he up to the moment of his death strenuously resisted all approaches from the clergy, and would not consent that even a single prayer should be made in his behalf.

His ordinary conversation and mode of expressing himself was of a low order—very profane, and in other respects not choice—yet he could immediately assume the bearing and manners of a cultivated gentleman, with language and expressions of the most finished character.

His will was strong and determined. No better illustration of this feature in his character can be given than his reply to the following question addressed to him by the commissioners:

Question. "Would the fact of another existence, and that existence one of rewards and punishments for your conduct

in this life, make any difference to you in regard to your acts?"

Answer. "No; I should do as I intended, without regard to the existence of a God or a devil, a heaven or a hell; I have felt this pride during my whole life. I never wished to get any thing out of anybody."

In his domestic habits Ruloff was amiable, quiet, and retiring, laboriously studious, and as Prof. Leurio, 170 Third Avenue, was the favorite of all the children in the vicinity, for whom he always had a pleasant word, and oftentimes presents of toys, candies, etc.

Was Ruloff of Sound Mind?—Much discussion has been excited upon the subject of Ruloff's sanity. So singular had been his conduct, and so remarkable his bearing while under sentence of death, that, in the judgment of many, he could only be regarded as of unsound mind. He himself, however, stoutly resisted every such imputation. When the commissioners appointed by Governor Hoffman to visit him, and to report upon his condition, announced to him the object of their visit, he at once exclaimed: "Gentlemen, this is no work of mine. I do not pretend to be either insane or an idiot. I am feeble in body, as you may see, but this has not affected my mind. The proposal of a commission is no move of mine." To a friend who intimated to him that he thought he (Ruloff) might be a *little cracked* upon the subject of philology, he replied: "Well, I am not half as big a fool as you are for thinking so."

There was no plea of insanity interposed upon his trial; the defence resting upon the supposed inability of the prosecution to connect Ruloff with the perpetrators of the murder. In fact, the circumstances of his arrest, and his subsequent demeanor, would have precluded all expectations of an acquittal. He was arrested, it will be recollected, making his way stealthily out of town in the middle of the night, eluding the vigilance of officers. When questioned as to where he was from, and where he was going, he stated that he had come from Rochester, and had been put off the cars, for want of money, at Union, nine miles west of Binghamton, and was walking to New York City; and, when taken to view the bodies of Jarvis and Dexter, he denied all acquaintance with or knowledge of

them. This course indicated a sense of guilt, a consciousness of crime, and a desire to avoid its consequences, which is entirely inconsistent with the irresponsibility of an insane person.

There are, however, many features in Ruloff's case that go to establish the conviction that his mind was not evenly balanced, but that, in many of its operations, it had become disordered and unsound. As the body, by confinement in a single posture for a length of time, becomes distorted and contracted, and loses the power of regaining its former symmetry; so the mind, when long directed to any one pursuit, and when held in one channel of intense thought, loses its power of true perception; the reasoning powers become subordinate to the one controlling passion or thought, and mental irregularity and unsoundness ensue.

Such, there is reason to believe, has been the condition of Ruloff's mind. In early life he contracted a fondness for the study of ancient languages; this fondness grew into a passion with him, and he surrendered himself to it. Then came distorted visions. In one of his replies to the commissioners, he says: "For over thirty years I have been impressed with the fact that there was something in language that I was to discover." As his mind became more and more intensified upon the subject, the delusion came that he had made his great discovery. That delusion continued. He told Prof. Mather that he "felt convinced that his theory of language was a special revelation to him." He could see nothing anywhere but his favorite theme. "He maintained that all the fictions of Greek and Roman mythology covered some great philological truths."

That Ruloff had the most extravagant expectations of the value of his work, is illustrated by the fact that in 1868, as Prof. Leurio, he attended a convention of philologists, at Poughkeepsie, offered his book for the approval of the members, and demanded five hundred thousand dollars for his discovery and copyright. Mr. E. Jakobs, of 170 Third Avenue, informs me that Ruloff often at home expressed the most sanguine anticipations of the results of his labors, and the large expectations he entertained of pecuniary returns when his work should be completed, and often remarked that he should then be above want.

While awaiting the day of his execution, Ruloff expressed no concern or anxiety as to his own fate; it was the great loss to the world which the failure of his discovery would cause. In this he was earnest and sincere. In an appeal which he made to the Governor but a few days before his execution, he asked a respite, not for himself, but for his book; when that was completed, he expressed a willingness to suffer the penalty of the law. Prof. Mather thus describes this feature in Ruloff: "His enthusiasm is most remarkable. He sat there in his chains, just sentenced by the highest court to die upon the gallows, and, without a word or apparently a thought about his doom, he argued and pleaded for his favorite theory as though he were wrestling for his life, and was determined to win."

He was more or less incoherent on his favorite subject. In a weekly paper, published in Binghamton, he occupied every week at least two columns with the material of his work. In that matter, as published, this incoherency is plainly to be distinguished.

I think that these instances indicate in Ruloff a distorted imagination, false reasoning, and disordered judgment on the subject of his favorite study. In this respect his mind corresponded to that large class of men who run after one idea, and who spend an entire lifetime in following some *ignis futurus*. Of this class are those who have filled the Patent-Office, at Washington, with useless models; who prospect for mines in the most improbable regions; who embark in enterprises which every one but themselves can see to be foolish; and who, from the continued and increasing disorder of the mental machinery, at length become fit subjects for a lunatic asylum.

The investigation of the commissioners appointed by Governor Hoffman, as appears by their report, was defective in this, that it did not bring out distinctly this peculiar defect of Ruloff's mind. While the examination made apparent his intellectual capacity, exhibited his powers of reasoning, and his adroitness in the discussion of metaphysics, it only alluded to the history of his philological studies, without drawing out in detail his peculiar ideas, or awakening his enthusiasm upon the subject. The examination does not appear to have been intended to discover any latent or concealed mental disorder.

The circumstances under which the commissioners visited Ruloff would be very likely to defeat any such purpose, as he would at once be placed upon his guard. The object of the examination was announced to him. He did not wish to be looked upon as insane. He had rather die the death of a felon, than to have the great discovery of his life—the work that had engrossed his attention for years—regarded only as the production of a disordered mind. The appointment of a commission “was no move of his.” He, consequently, would be as reticent as possible, and his delusions could only be made to appear by skilful questioning, after his confidence had been secured. To Prof. Mather he expressed the belief that his discovery was a special *revelation*; to the commissioners, he only said that he had been impressed with the idea that there was something in language which he was to *discover*. The report does not establish the fact that Ruloff was “entirely sane;” on the contrary, it does reveal indications of mental delusion, quite characteristic of partial insanity.

Ruloff entertained the idea that he was an injured man; that the public had conspired against him; and that he was a victim of public injustice and prejudice. In return, he cordially hated everybody, and was ready to make reprisals on every occasion. He believed it no crime to appropriate other people’s property for the furtherance of his great work. To arrest him, even in the act of burglary, was to him an unjustifiable infringement of his personal liberty. I think he fully believed in the position taken on his trial, that the killing of Mirrick was done in self-defence; that Mirrick and Burrows, having first commenced the affray, were aggressors, and, consequently, were not under the full protection of the law.

This distortion of his mind prevented Ruloff from cultivating the higher moral sentiments, or developing his finer emotional nature. Impelled by violent explosions of passion, he was capable of doing any criminal act. Burglary, arson, and murder, would all be resorted to, to carry on his operations, and to remove all obstacles to his success. This state of mind and feelings would very naturally determine to that moral insensibility (which has already been noted), that recklessness of consequences, and that utter *abandon* of all that is

good, which seem to have been characteristic of Ruloff. How much the peculiarity of his organization had to do with the mental phenomena he exhibited, or how far it ought to be considered in mitigation of his guilt, it is not yet time to discuss or determine. The tribunal within whose jurisdiction he now is will duly consider, and mete out equal and exact justice to him, for "shall not the Judge of all the earth do right?" The interests of society undoubtedly demanded that his depredations should cease, and, in the judgment of the law, his life was forfeited and taken.

The case of Ruloff will rank with the most celebrated criminal trials of our country, for the peculiar circumstances attending the case, and the great interest it has excited. The trial of Ephraim K. Avery, of Fall River; of Richard P. Robinson, of New York; of John W. Webster, of Boston; and Mrs. Cunningham, of New York; each, in its turn, attracted a large share of public attention and interest, but none more so than did the trial of Edward H. Ruloff.

In presenting the case before this Society, I only desire to place on record the anatomical and other peculiarities of the extraordinary man whose case we have been considering, as a contribution to the general fund of scientific knowledge.

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MEDICO-LEGAL NOTES

ON THE CASE OF

EDWARD H. RULOFF;

WITH

*OBSERVATIONS UPON, AND MEASUREMENTS OF,
HIS CRANIUM, BRAIN, ETC.*

BY

GEORGE BURR, M. D.,

BINGHAMTON, N. Y.

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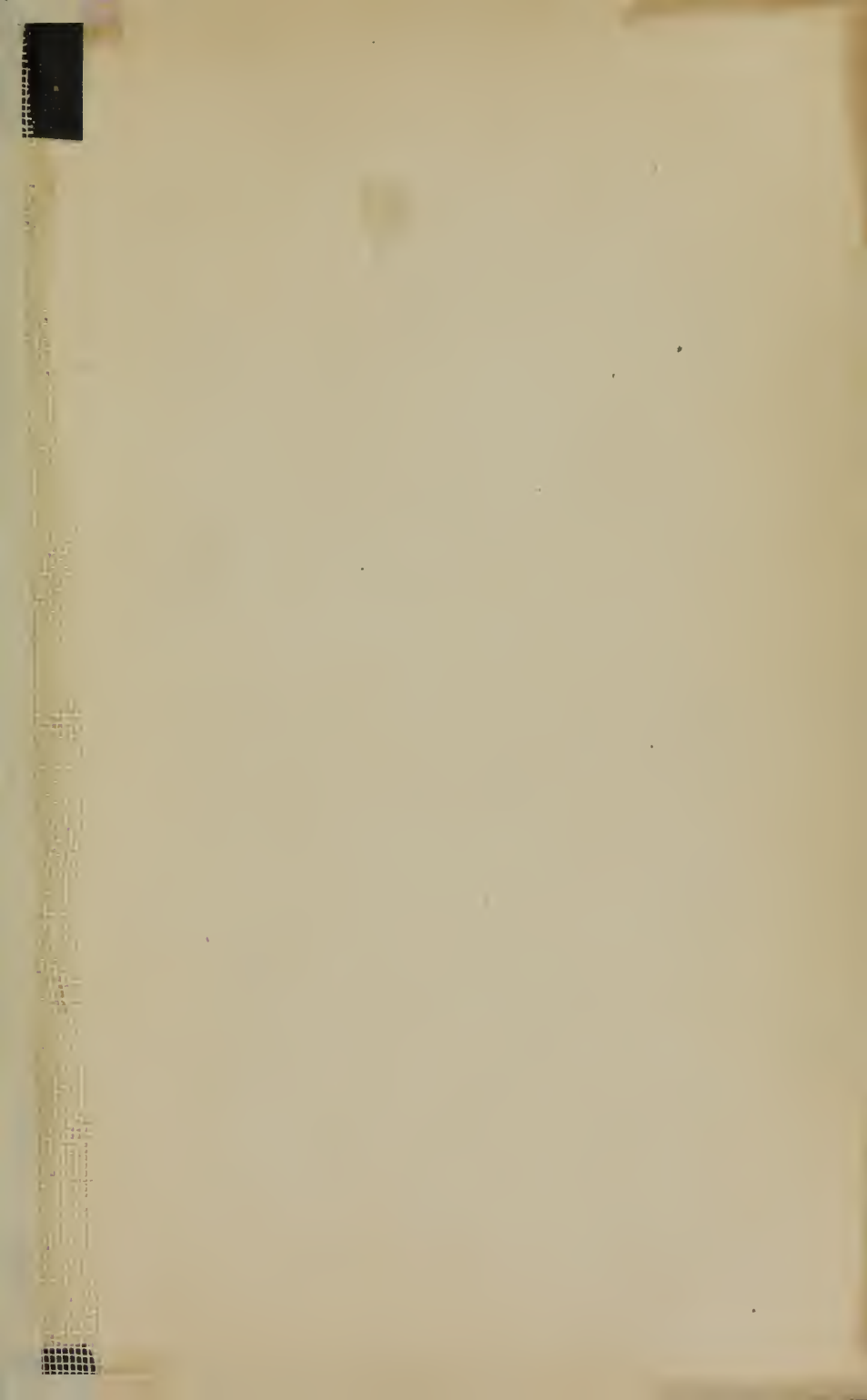
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